AUTHOR INDEX

Angus, J. A. 303

Bewick, G. S. 411
Bloom, S. R. 353
Borch, R. F. 371
Buckpitt, A. R. 393

Cocks, T. M. 303
Collis, M. G. 143
Cottrell, G. A. 411

Darnowski, J. W. 381
Devereux, T. R. 243
Domin, B. A. 243
Drell, W. 195

Fahrenkrug, J. 515
Franklin, R. B. 393
Fregly, M. J. 85

Gavaler, J. S. 27
Guillory, R. J. 1

Handschumacher, R. E. 381
Holmgren, S. 257

Jakob, W. 49

Klubes, P. 289

Lennard, M. S. 461
Leyland-Jones, B. 289
Lincoln, T. M. 479

Markman, M. 371

Neu, H. C. 207
Newman, R. A. 163
Nilsson, S. 257

Osheroff, N. 223

Philpot, R. M. 243
Polak, J. M. 353

Rägo, L. 503
Räty, M. 503
Rosenblum, E. 27

Saano, V. 503
Siddik, Z. H. 163
Smith, A. C. 443

Tarter, R. E. 27

Van Thiel, D. H. 27
Vessel, E. S. 535

Welch, A. D. 195
Wynick, D. 353

Zschiesche, W. 49

AUTHOR INDEX

Angus, J. A. 303

Bewick, G. S. 411
Bloom, S. R. 353
Borch, R. F. 371
Buckpitt, A. R. 393

Cocks, T. M. 303
Collis, M. G. 143
Cottrell, G. A. 411

Darnowski, J. W. 381
Devereux, T. R. 243
Domin, B. A. 243
Drell, W. 195

Fahrenkrug, J. 515
Franklin, R. B. 393
Fregly, M. J. 85

Gavaler, J. S. 27
Guillory, R. J. 1

Handschumacher, R. E. 381
Holmgren, S. 257

Jakob, W. 49

Klubes, P. 289

Lennard, M. S. 461
Leyland-Jones, B. 289
Lincoln, T. M. 479

Markman, M. 371

Neu, H. C. 207
Newman, R. A. 163
Nilsson, S. 257

Osheroff, N. 223

Philpot, R. M. 243
Polak, J. M. 353

Rägo, L. 503
Räty, M. 503
Rosenblum, E. 27

Saano, V. 503
Siddik, Z. H. 163
Smith, A. C. 443

Tarter, R. E. 27

Van Thiel, D. H. 27
Vessel, E. S. 535

Welch, A. D. 195
Wynick, D. 353

Zschiesche, W. 49

SUBJECT INDEX

Adenosine
  adenosine deaminase effects 147, 148
  antagonists effects 148–50
  dipyridamole effects 147
  fate 144
  formation 143–45
  tissue concentrations 145–47
  vasodilation
    calcium transients 154
    cyclic nucleotides 153
    mechanisms 150
    neuroeffector effects 154–56
    smooth muscle 151–55
  vasodilator role 150–57
Adenosine deaminase, adenosine effects 147, 148
Adipokinetic hormones, invertebrate 428
Adrenaline, non-mammalian vertebrates 261, 262
β-Adrenoceptor antagonists
  drug interactions 473, 474
  gene frequency 470
  polymorphic oxidation 461–74
  race 468, 469
  stereochemistry 467, 468
  therapeutic effects 472, 473
Adverse effects
  β-adrenoceptor antagonists 473
  cisplatin 371–77
  5-fluorouracil 295, 296
  nitrosoureas 443
  quinolones 218
Affinity labelling 2
5-AMP formation 144
Amyloid
  classification 50–52
  criteria 50
  -prevention 60
  -producing regimens 60
Amyloidosis 49–75
    birds 52–56
    orders 55
  classification 50–52
  fishes 52
  mammals 60–65
    cat 64, 65
    cattle 65
    dog 62, 63
    endocrine 65–69
    islet, cats 66, 67
    islet, monkeys 67
    mink 63, 64
    orders 61
    primates 62
    senile 69–71
  pathogenesis 56
  rodents 57–61
    immunohistochemistry 58
  scrapie 72
  therapeutic studies 72, 73
  thyroid 66, 69
  tumour 71
Antipyrine pharmacogenetics 541–43
Arylazides 5–9
  intermediate reactions 7
  photochemistry 6
Aryl nitrenes, protein functional groups 8
Atherosclerosis, endothelium-derived growth factor 339–41
Autonomic nervous system
  anatomy, non-mammalian 258–60
  cells 260, 261
Azaribine
  generic name 195
  metabolism 200, 201
  neurotoxicity 199
  psoriasis 201
  withdrawal 195, 196
Azaribine–homocystinemia–thrombosis 195–203
  and homocystinuria 196

Benzisoquinolinediones metabolism 185–87
  pathways 186
Benzodiazepines
  peripheral binding sites 503–10
    calcium role 507
    central action 505, 506
    distribution 504, 505
    ligands 508, 510
    peripheral effects 508, 509
    regulation 506, 507
  structures 504
Beta-blockers, polymorphic control 462
1,3-Bis(2-chloroethyl)-1-nitrosourea (BCNU), pulmonary toxicity 445, 446
  animal models 446–49
  antioxidant 453
  biochemical markers 449–51
  mechanisms 451–53
Bombesin, non-mammalian vertebrate 265–67
Bronchiolar epithelial cell necrosis, naphthalene role 393–407
Bufralol
  1′-hydrolase, stress selectivity 471
  polymorphic oxidation 465
BW-A770U metabolism 184, 185

Calcium, endothelium-derived growth factor release 315–17
Caracemide
  degradation 167
  metabolism 167, 168
Catecholamines, CNS and acute cold 107
CB 3717
  glutamation 172
  metabolism 171–73
1-(2-chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)
  pulmonary toxicity 454, 455

1-(2-chloroethyl)-3-(4-methylcyclohexyl)
-1-nitrosourea (methyl-CCNU)
pulmonary toxicity 456
Chloroquinoxaline sulphonamide
metabolism 179, 180
Chlorozotocin (DCNU), pulmonary toxicity 455, 456
Cisplatin toxicity modulation 371–77
diethyldithiocarbamate 374–76
glutathione 376
hypertonic saline 371, 372
mesna 376
probenecid 377
sodium thiosulphate 372, 373
WR-2721 374
Cold
hypothalamic–pituitary–thyroid axis 85–129
factors affecting response 88–90
iodine intake 121, 122
thyroid cytology 107, 108
Cytochrome P-450, pulmonary cell 246, 247

Diabetes mellitus and somatostatin 364
Diarrhoea, fluoroquinolines 215, 216
1,2-Dihydroxy-1,2-dihydronaphthalene
metabolism 400, 401
DNA
topoisomerase metabolites 223–36
xenobiotic metabolites 252, 253
DNA gyrase inhibitors 207–19
activity spectrum 209, 210
clinical uses 212–17
microbiology 208
pharmacology 212
structures 207, 208
Dopamine
invertebrate 425, 426
thyroid effects on cold 97–100

Endothelium-derived relaxing factor 303–43
and acetylcholine 303, 304
bioassay, endothelium culture 307, 308
dual 313
system 312
bradykinin 322
characterization 304–307
chemical properties 314
coronary artery 321, 322
discovery 303, 304
half-life 310–14
and nitric oxide 318–25
pathology 337–43
receptors 310
heterogeneity 325–36
release 308, 310
calcium 315–17
role 336, 337
smooth muscle 318
trachea 321, 322
vasodilation 481
Environmental factors, drug metabolism 549–51
Ethanol 27–43
absorption 27
androgen production 40,41
endocrine function 34, 35
estrogen binding proteins 41, 42
feminization 40–43
gonadal function 36–40
female 38, 39
male 36–38
menopause 39, 40
metabolism 28, 29
pharmacodynamics 28
prolactin 42, 43
sex differences in pharmacodynamics 29–32
ingestion rates 32–34
metabolism 30–32

Flavone acetic acid
ester 176
metabolism 175, 177
5-Fluoro-2′-deoxyuridine, uridine rescue 298
Fluoroquinolones, clinical uses 212–17
5-Fluorouracil
antitumour activity enhancement 289–99
cytidine rescue 298, 299
DNA directed actions 289
metabolism 290
nucleosides 382, 383
structure 290
uridine pool manipulation 381–89
uridine rescue 291–93
clinical studies 293–95
dose 295
mechanism 296, 297
oral 297, 298
FMRFamide-peptide, invertebrates 429–32

GABA, invertebrate 414–17
Gastrin, non-mammalian vertebrate 267, 268
Gastrointestinal disease and somatostatin 353–65
Genetic factors and drug metabolism 538–51
Glutamate, invertebrate 412–14
Glycine, invertebrate 417
GMP, cyclic
agents affecting smooth muscle 480–82
calcium metabolism 488
-dependent protein kinase 485, 486
phosphodiesterase 484
smooth muscle
mechanism of action 487–95
metabolism 482–85
vasodilation mechanisms 479–96
GOE 1734
biological transformation 177
metabolism 177, 178
Guanylate cyclase, smooth muscle 482, 483

Hexamethylene bisacetamide metabolism 173–75
scheme 174
Histamine, invertebrate 421
Homocystinuria 196
biochemistry 197–99
genetics 197
4-Hydroxyanisole metabolism 163, 164
Hydroxyphenylretinamide metabolism 169–71
5–Hydroxytryptamine (5-HT, serotonin)
biosynthesis 101
invertebrate 418–21
non-mammalian vertebrates 262–64
thyroid effects in cold 100–103
in vitro 102
Hypertension and endothelium-derived relaxing factor 342, 343
Hypothalamic–pituitary–gonadal axis
ethanol effects 36–43
normal 35, 36

Invertebrates, neurotransmitters 411–34
Iodine
  intake and cold 121, 122
  serum levels and season 125–57
  thyroid and season 124, 125
4-Ipomeanol metabolism 180–84
  scheme 182

Loewi-preparation 258
LY195448 metabolism 187, 188

Merbarone metabolism 178, 179
Metabolism
  anticancer agents 163–88
  pulmonary cell xenobiotics 243–54
2-Methylnaphthalene
  metabolism 401, 402
    routes 397
  metabolite binding 402, 403
Metoprolol, polymorphic oxidation 462–65
Muscle, smooth; cyclic GMP mechanisms of action 490–95

Nalidixic acid structure 207
Naphthalene
  biotransformation 396
  bronchiolar epithelial cell necrosis 393–407
  environmental 393, 394
  metabolism 395
    epoxidation 398
    glutathione adducts 399
    products 397
  metabolite binding 402, 403
    cytotoxicity 402–405
  toxicology 394, 395
1-Naphthol metabolism 164–47, 400
Neuropeptides *see also* individual peptides
  non-mammalian vertebrates 277, 278
Neuropeptide Y, non-mammalian vertebrates 268, 269
Neurotensin, non-mammalian vertebrates 269, 270
Neurotransmitters, invertebrate 411–34
Nitrenes 3
  precursor analogues 5
  reactions 6
Nitrosoureas
  pulmonary toxicity 443–56
  structures 444
Nitrovasodilators 480
Norepinephrine and thyroid function in cold 92–97

Octopamine
  invertebrate 421–25
  mode of action 424
  modulator 472
  myogenic rhythm 423
Oxolinic acid structure 207

Pedigree analysis 541
  assessment 549
Pharmacogenetics 535–51
  methods of assessment 547
Phenylbutazone, pharmacogenetics 547
Phenytoin pharmacogenetics 545, 546

Photoaffinity labelling
  arylazides 5–9
  development 1
  non-specific 18, 19
  objectives 9–11
  phase transfer-induced photodependent labelling 21–23
  photochemical crosslinking 11–14
  photosensitized destruction 19, 20
  post-photolytic labelling 20
  pseudo- 19
  reagents 2–5
  scavengers 20, 21
  topological labelling 14–18
    hydrophilic labels 15
    hydrophobic reagents 15–18
Photoprobe 4
Proctolin, invertebrate 427, 428
Prolactin, serum concentrations and cold 127
Propranolol, polymorphic oxidation 466, 467
Psoriasis treatment 201, 202
Pulmonary cell
  benzo(a)pyrene metabolism 250, 251
  cytochrome P-450 246, 247
  isolation 243, 244
  metabolites and DNA 252, 253
  proteolysis 244, 245
  xenobiotic metabolism 247–51
  xenobiotics metabolized 247–52
Purine derivatives, non-mammalian vertebrates 254

Quinolone antibiotics
  activity 210
  clinical uses 212–17
  pharmacokinetics 211
  prophylaxis 217, 218
  side effects 218

Race, polymorphic oxidation 468, 469
Receptors
  α_2-adreno, endothelium 326–31
  benzodiazepine peripheral 503–10
  5-HT, endothelium 331, 332
  muscarinic endothelium 332–35
  somatostatin 356
  fluoroquinolones 214, 215
Retractor penis inhibitory factor 324, 325
Rhodamine 123
  metabolism 175

Second messengers, adenosine vasodilation 153, 154
Serotonin *see* 5-HT
Sex, ethanol effects 27–43
Sexually transmitted diseases, fluoroquinolones 213, 214
Skin infection, fluoroquinolones 216
Small cardioactive peptides, invertebrates 432
Somatostatin
  analogue 356
    pharmacology 357, 358
    structure 353
  cell distribution 354, 355
  diabetes mellitus 364
  gastrointestinal bleeding 358
  gastrointestinal disease 353–65
  gastrointestinal functions 355, 356

non-endocrine cancer therapy 363, 364
non-mammalian vertebrates 270, 271
pancreatic islet cell tumours 359–61
pancreatic tumour therapy 361–3
receptors 356
structure 353
thyroid effects in cold 102–104
Spasm, endothelium-derived relaxing factor 341
Substance P, non-mammalian vertebrate 271–74

Theophylline pharmacogenetics 543–45
Thyroid activity and cold 85
cytology 107, 108
duration 109–21
guinea pig 91, 92
histology 112
iodine uptake 109
and release 113, 114
man 92
metabolic rate 111
morphology 111, 112
protein-bound iodine 109, 116
rat 85–91
serum hormones 115–17
thyroid hormone metabolism 117–21
thyroxine secretion 114, 115
Thyroid function
metabolic rate 122, 123
prolactin 127
seasonal effects 122–27
Timolol, polymorphic oxidation 465, 466
Topoisomerases, DNA interaction 233–36
Topoisomerase I
DNA binding 226, 227
enzymology 225
modification 227, 228
purification 224
structure 224
Topoisomerase II
ATP hydrolysis 234
DNA binding 231, 232
DNA cleavage 232, 233
enzymology 229–31
modification 235, 236
purification 228, 229
structure 229
TRH (thyrotropin)
dopamine effects in cold 97–100
histamine effects in cold 106, 107
5-HT effects in cold 100–103
norepinephrine effects in cold 92–97
somatostatin effects in cold 102–104
T_3, T_4 effects in cold 104, 105
TSH (thyroid stimulating hormone)
dopamine effects in cold 97–100
histamine effects in cold 106, 107
5-HT effects in cold 100–103
norepinephrine effects in cold 92–97
somatostatin effects in cold 102–104
T_3, T_4 effects in cold 104, 105
Trimelalol
metabolism 168, 169
transformation 169
Twin studies
assessment 548, 549
genetic research 536–38
pharmacogenetics 539–51

Uridine
metabolism scheme 387
pools
5-fluorouracil enhancement 381–89
pharmacological control 387–89
tissue salvage 384–87
Uridine phosphorylase inhibition 383, 384
Uridine rescue 289–99
mechanism 296, 297
Urinary tract infection, fluoroquinolones 212, 213

Vasoactive polypeptides (VIP)
amino acid sequence 516
biological effects 516, 518
cotransmission 526, 527
exocrine glands 524–26
genital and sexual role 522, 523
intestine 520–22
isolation 515, 516
neurotransmitter 518
oesophagus 519, 520
pancreas 525, 526
pharmacological effects 517, 518
release 519
respiratory system 523, 524
stomach 520
vertebrates, nonmammalian 274–77
Vasodilation
adenosine effects 150–57
cyclic GMP 479–96